STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, *Governor*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

9771 Clairemont Mesa Blvd., Ste. B
San Diego, California 92124-1331
Telephone: (619) 265-5114

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 29, 1987

Mr. Jack Brunton, Supervisor
Environmental Affairs
San Diego Gas and Electric Company
P.O. Box 1831
San Diego, California 92112

Dear Mr. Brunton:

CLEANUP AND ABATEMENT ORDER NO. 87-95

Enclosed is Cleanup and Abatement Order No. 87-95. This Cleanup and Abatement Order No. 87-95 is being issued to San Diego Gas and Electric (SDG&E) under the authority of California Water Code Section 13304 in response to the unauthorized release of fuel hydrocarbons from the underground fuel storage tank system at the Mountain Empire Operating Center located at 31115 Highway 94 in Campo. The fuel discharge, discovered on November 6, 1986, has resulted in the pollution of the underlying ground water.

Basically, the Cleanup and Abatement Order directs SDG&E to clean up the subsurface petroleum hydrocarbon contamination resulting from the illicit fuel discharge. The Order directs SDG&E to submit quarterly progress reports to this office until, in the opinion of the Executive Officer, the cleanup can be considered complete. In order to establish the final cleanup levels to be imposed at this site, the Order directs SDG&E to develop, design and determine the cost of cleanup strategies for a range of potential final cleanup levels. The Order directs SDG&E to implement the cleanup alternative selected by the Regional Board staff's review of the cleanup alternatives developed by SDG&E.

In order to avoid further enforcement action by the Regional Board, I strongly urge a prompt and complete response to each directive of Cleanup and Abatement Order No. 87-95. The issuance of this Cleanup and Abatement Order to SDG&E will be discussed at the June 15, 1987 Regional Board meeting. This meeting is open to public participation and you are welcome to attend. It is scheduled for 9:00 a.m. at the State Office Building, Room B109, 1350 Front Street, San Diego.

If you have any questions, please call Mr. Scott Hugenberger at the above number.

Very truly yours,

LADIN H. DELANEY
Executive Officer

SGH:vn

cc: Ms. Victoria Gallagher
Hazardous Materials Management Unit
County of San Diego Dept. of Health Services

State Water Resources
Control Board
Division of Water Quality
Mr. Archie Matthews

5. On April 2, 1987 a meeting was held at the County of San Diego Department of Health Services (DOHS) with representative from DOHS, Regional Board and SDG&E. SDG&E staff indicated that the subsurface contamination may have originated from leaky fittings.

6. The *Comprehensive Water Quality Control Plant Report, San Diego Basin (9)*, (Basin Plan) was adopted by this Regional Board on March 17, 1975; approved by the State Water Resources Control Board on March 20, 1975; and updated by the Regional Board on February 27, 1978; March 23, 1981; January 24 and October 3, 1983; and August 27, 1984. The 1978, 1981, 1983 and 1984 updates were subsequently approved by the State Board.

7. Except where otherwise stated, the word "contamination" will be used in this Cleanup and Abatement Order with the following definition:

> "Contamination" refers to soil or ground water which contains waste or waste constituents which are not naturally occurring, or which contain waste or waste constituents in concentrations exceeding the naturally occurring background concentrations.

8. Section 13050(l) of the California Water Code defines "pollution" and "contamination" as follows:

> "Pollution means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects (1) such waters for beneficial uses, or (2) facilities which serve such beneficial uses."
>
> "Contamination" means an impairment of the quality of the waters to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" shall include any equivalent effect resulting from the disposal ofwaste, whether or not waters of the state are affected.

9. The Basin Plan established the following uses as the potential and existing beneficial uses for the ground water in the Campo Hydrographic Subarea:

   a. Municipal and Domestic Supply
   b. Agricultural Supply
   c. Industrial Service Supply
   d. Ground Water Recharge

10. To protect the beneficial uses listed in Finding 9, it is necessary that the ground water underlying the demolished service station site not contain constituents in concentrations exceeding the following levels State Department of Health Services Action Levels and Regional Board criteria:

Constituent	Maximum Allowable Concentration
Total Xylenes	620 µg/L
Benzene	0.7 µg/L
Toluene	100 µg/L
Ethylbenzene	680 µg/L
Total Petroleum Hydrocarbons	1.0 mg/L
Total Lead	50 µg/L

11. The unauthorized release of petroleum hydrocarbons at the SDG&E Mountain Empire Operating Center has caused a "pollution" and "contamination" of the state's waters as defined in Finding 8 in that the fuel has migrated from the tank system through the soil column, resulting in contaminant concentrations in the underlying ground water in excess of the levels listed in Finding 10. Thus, the municipal and domestic supply beneficial use of the ground water in the Campo Hydrographic Subunit has been impaired.

12. The quality of the ground water underlying 31115 Highway 94 in Campo is subject to the provisions of the State Water Resources Control Board's Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California* (hereinafter referred to as the Nondegradation Policy). Under the terms and conditions of the Nondegradation Policy, the existing (pre-discharge) ground water quality of the Campo Hydrographic Subunit must be maintained unless it is demonstrated that a decrease in water quality (1) will be consistent with maximum benefit to the people of the state, (2) will not unreasonably affect beneficial uses, and (3) will not result in water quality less than prescribed in the Basin Plan or other adopted policies.

13. This enforcement action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Section 15321, Chapter 3, Title 14, California Administrative Code.

IT IS HEREBY ORDERED, That pursuant to Section 13304 of the California Water Code:

1. SDG&E shall take:

   a. Effective remedial action to immobilize the free product plume, if any, and the dissolved product plume of petroleum hydrocarbon contaminated ground water.

   b. Effective remedial action to protect the beneficial uses of the ground water of the Campo Hydrographic Subunit of the Tia Juana Hydrographic Subunit.

   c. Effective remedial action to remove all free petroleum hydrocarbon product from the affected ground water.

d. Effective remedial action to clean up the petroleum hydrocarbon contaminated soil and ground water to the satisfaction of the Regional Board staff.

2. SDG&E shall submit monitoring reports to this office on a quarterly basis until, in the opinion of the Regional Board Executive Officer, the site has been cleaned up. The monitoring reports shall describe the progress made in the cleanup operations and shall demonstrate that the petroleum hydrocarbon waste released from the SDG&E service station has been and remains immobilized. The quarterly monitoring reports shall include, but not be limited to, the following information:

a. A description of the remedial actions employed by SDG&E.

b. Quantity of petroleum hydrocarbon product recovered for the reporting period and the total to date.

c. Quantity of ground water extracted for the monitoring period, the total to date, and its ultimate disposal point.

d. The water levels and product thicknesses in all of the wells.

e. Any information necessary to demonstrate that the petroleum hydrocarbon ground water contamination plume resulting from the unauthorized release from the underground tank system at the SDG&E is fully contained and immobilized.

f. A map of the site with hydrologic contours showing the ground water flow pattern and the locations of all of the wells.

g. A map of the site showing the boundary of the free petroleum hydrocarbon product plume and also of the dissolved product ground water plume.

h. A ground water sample should be collected from each monitoring well and analyzed for total petroleum hydrocarbons. At least one ground water sample within the contamination plume should be analyzed for:

(1) Benzene
(2) Toluene
(3) Total Xylenes
(4) Ethylbenzene
(5) Total Petroleum Hydrocarbons

The quarterly monitoring reports shall be submitted to this office in accordance with the following schedule:

Reporting Period	Date Due
January, February, March	April 30
April, May, June	July 30
July, August, September	October 30
October, November, December	January 30

3. SDG&E shall submit a report to this office no later than June 30, 1987 characterizing the vertical and horizontal extent of petroleum hydrocarbon contamination resulting from the fuel leak from the underground storage tank system at the Mountain Empire Operating Center in Campo. The report shall include the following:

   a. A site map showing the location of all borings and monitoring wells, the underground tank pit and any underground utilities that might act as conduits along which the petroleum hydrocarbons might migrate.

   b. The water levels and fuel product thicknesses in all of the wells.

   c. A site map showing the hydrologic contours and the boundary of the free product and dissolved product plumes.

   d. All ground water samples should be analyzed for:

      (i) Benzene
      (ii) Toluene
      (iii) Total Xylenes
      (v) Total Petroleum Hydrocarbons
      (vi) Ethylbenzene

   e. Soil samples should be analyzed for:

      (i) Benzene
      (ii) Toluene
      (iii) Total Xylenes
      (iv) Total Petroleum Hydrocarbons

4. Upon direction of the Regional Board Executive Officer at some point in the future, before the hazardous substance spill site cleanup program can be terminated, SDG&E shall submit a report to this office identifying and developing a range of remedial action alternatives for the final phase of the cleanup program. The report shall examine and determine the cost of a cleanup strategy capable of achieving each of the following potential final cleanup levels in the affected ground water zone:

   a. Treatment and/or removal of the contaminated ground water to attain the naturally/occurring background concentrations for the following constituents in the underlying ground water aquifer:

      (i) Benzene
      (ii) Toluene
      (iii) Ethylbenzene
      (iv) Total Xylenes
      (v) Total Petroleum Hydrocarbons
      (vi) Lead

      This cleanup alternative represents basically complete cleanup of contamination resulting from the petroleum hydrocarbon discharge.

b. Treatment and/or removal of the contaminated ground water to attain the following criteria in the underlying ground water aquifer:

Constituent	Maximum Concentration
Benzene	0.67 µg/L
Toluene	100 µg/L
Total Xylenes	620 µg/L
Ethylbenzene	680 µg/L
Total Petroleum Hydrocarbons	1.0 mg/L
Lead	50.0 µg/L

c. A remedial action alternative proposing the attainment of petroleum hydrocarbon concentrations less stringent than those specified in (a) and (b). This alternative concedes the affected ground water to a degraded status. It will be necessary to establish, to the satisfaction of the Regional Board, that the petroleum hydrocarbon concentrations being proposed by SDG&E under this alternative would comply with the following criteria in accordance with the state's nondegradation policy.

(1) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water contamination zone would not reasonably affect the beneficial uses listed in Finding 9.

(2) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water contamination zone will be consistent with the maximum benefit to the people of the state.

(3) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water contamination zone will not result in water quality less than prescribed in the Basin Plan or other adopted policies.

All free petroleum hydrocarbon product must be removed under all three alternatives.

5. The cleanup alternatives required under Directive 4 of this Order will be evaluated in detail by Regional Board staff. This evaluation will include technical considerations, estimated costs, and anticipated water quality impacts associated with each alternative. Based on this evaluation a specific cleanup alternative will be selected by the Regional Board for implementation. Upon notification by the Executive Officer, SDG&E shall implement the cleanup alternative selected by the Regional Board. If, however, SDG&E wishes to implement cleanup alternative 4(a), the Company will not be required to develop cleanup strategies corresponding to alternative 4(b) and 4(c). If SDG&E wishes to implement cleanup alternative 4(b), the company will not be required to develop a cleanup strategy corresponding to alternative 4(c).

6. SDG&E shall remove and/or treat all contaminated soil containing total extractable petroleum hydrocarbons in concentrations exceeding 100 mg/kg, unless SDG&E can demonstrate: (a) to the Regional Board's staff

satisfaction that higher soil concentrations will not act as a source of petroleum hydrocarbon contaminants to the underlying ground water by, for example, infiltration and leaching processes; (b) to the County of San Diego Department of Health Services' satisfaction that higher soil concentrations will not present a threat to the public or environmental health.

7. SDG&E shall dispose of petroleum hydrocarbon contaminated ground water and/or soil in accordance with all applicable local, state and federal regulations.

8. After SDG&E demonstrates to the Regional Board staff's satisfaction that the final cleanup levels have been achieved throughout the soil and ground water contamination zones, SDG&E shall continue to monitor the ground water and submit quarterly monitoring reports in accordance with Directive 2 of this Order for a period of one year. If at any time during this post-cleanup monitoring the data indicate that the final cleanup actions. If, on the hand, the final cleanup levels have not been exceeded for the year of monitoring, then the petroleum hydrocarbon cleanup shall be considered complete.

Ordered by Ladin H. Delaney

Ladin H. Delaney
Executive Officer

Date: May 29, 1987

SGH:vn

Clerical Information Form (Please check applicable information for work desired)

(THIS FORM MUST ACCOMPANY ALL WORK TO BE PROCESSED BY THE TYPISTS)

Type of Format DUE DATE:_____ DATE SUBMITTED: 4/17/87

WDR___ NPDES___ Addendum___ Resolution___ C&D Order___ TCO___

Cleanup & Abatement ✓ Letterhead___ Memo letterhead___ Internal Memo___

Memorandum staff report___ C&D staff report___ Formal staff report___

Other_____

Word processing format ID Code_____ County Coops_____

Task Code: 120-34

File Designation: I'll file it
(title)

~~(Discha. Corr.~~ ___ Disch. Tech.___ ~~General~~ ___ UGT

Material prepared by: SGH

For signature of: LHD

cc's to: Co Health

_____

SPECIAL INSTRUCTIONS

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(certified mail, return receipt, Express Mail, Federal Express, etc.)

_____Copy of notification letter in WDS computer in-basket

_____IF THIS IS AN EXPEDITE ITEM, PLEASE CHECK HERE AND FILL IN DATE/TIME REQUIRED TO BE COMPLETED_____
(attach red "Expedite" tag)

FOR MATERIAL SUBMITTED FOR TYPING, PLEASE ATTACH ANY BACKGROUND MATERIAL AVAILABLE FOR REFERENCE.

11/85

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

CLEANUP AND ABATEMENT ORDER NO. 87-95
SAN DIEGO GAS AND ELECTRIC
MOUNTAIN EMPIRE OPERATING CENTER
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. San Diego Gas and Electric's (SDG&E) Mountain Empire Operating Center is located at 31115 Highway 94 in Campo. The site lies in the Campo Hydrographic Subunit of the Tia Juana Hydrographic Unit.

2. On November 6, 1986, SDG&E removed an underground 550 gallon tank from the ground at the Campo site. It is not known exactly how old the tank was but it was installed before SDG&E bought the site in 1970. SDG&E used the tank for unleaded gasoline but it may have been used for other fuels before SDG&E purchased the site.

3. Although no holes were noted upon the removal of the tank, soil contamination was observed in the excavation by a representative of the County of San Diego Department of Health Services (DOHS).

4. On March 6, 1987 SDG&E submitted a subsurface investigation report to this office dated March 2, 1987 and prepared by ERT. The report contains the following information:

   a. Six postal water supply wells are known to exist within one mile of the SDG&E facility. The closest well is approximately 320 feet east-northeast of the site.

   b. Four borings were installed and converted to monitoring wells.

   c. No floating free product was found in any of the four monitoring wells.

   d. Ground water was encountered three to six feet below grade. Ground water flow direction is towards Campo Creek less than 100 feet downgradient.

   e. Soil samples collected from the borings were analyzed and found to contain as much as 111 mg/kg total extractable hydrocarbons. The soil samples contained less than 18 mg/kg total lead.

   f. A ground water sample collected from the downgradient monitoring well(MW-4) was analyzed and found to contain 54 mg/L of total extractable hydrocarbons. Ground water samples from monitoring well MW-3 and the upgradient monitoring well MW-2 showed no detectable levels of total extractable hydrocarbons. It is not known how far downgradient beyond MW-4 the dissolved product ground water plume extends. The areal extent of this plume has not been delineated.

5. On April 2, 1987 a meeting was held at the County of San Diego Department of Health Services (DOHS) with representative from DOHS, Regional Board and SDG&E. SDG&E staff indicated that the subsurface contamination may have originated from leaky fittings.

6. The *Comprehensive Water Quality Control Plant Report, San Diego Basin (9)*, (Basin Plan) was adopted by this Regional Board on March 17, 1975; approved by the State Water Resources Control Board on March 20, 1975; and updated by the Regional Board on February 27, 1978; March 23, 1981; January 24 and October 3, 1983; and August 27, 1984. The 1978, 1981, 1983 and 1984 updates were subsequently approved by the State Board.

7. Except where otherwise stated, the word "contamination" will be used in this Cleanup and Abatement Order with the following definition:

> "Contamination" refers to soil or ground water which contains waste or waste constituents which are not naturally occurring, or which contain waste or waste constituents in concentrations exceeding the naturally occurring background concentrations.

8. Section 13050(l) of the California Water Code defines "pollution" and "contamination" as follows:

> "Pollution means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects (1) such waters for beneficial uses, or (2) facilities which serve such beneficial uses."
>
> "Contamination" means an impairment of the quality of the waters to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" shall include any equivalent effect resulting from the disposal ofwaste, whether or not waters of the state are affected.

9. The Basin Plan established the following uses as the potential and existing beneficial uses for the ground water in the Campo Hydrographic Subarea:

   a. Municipal and Domestic Supply
   b. Agricultural Supply
   c. Industrial Service Supply
   d. Ground Water Recharge

10. To protect the beneficial uses listed in Finding 9, it is necessary that the ground water underlying the demolished service station site not contain constituents in concentrations exceeding the following levels State Department of Health Services Action Levels and Regional Board criteria:

State of California
Regional Water Quality Control Board
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT
June 15, 1987

ITEM: 24c

SUBJECT: CLEANUP AND ABATEMENT ORDER No. 87-95, SAN DIEGO GAS & ELECTRIC COMPANY, MOUNTAIN EMPIRE OPERATING CENTER

DISCUSSION: San Diego Gas & Electric's Mountain Empire Operating Center is located at 31115 Highway 94 in Campo. Petroleum hydrocarbon contaminated soil was discovered at the site in November, 1986 when the San Diego Gas & Electric Company removed an underground fuel storage tank. Subsequent investigation by SDG&E revealed that the ground water, which lies at only three to six feet below the ground surface, is polluted with as much as 54 milligrams per liter of total petroleum hydrocarbons. It is not yet known how far down-gradient the petroleum hydrocarbon ground water contamination plume extends. There are six potable water supply wells within one mile of the site, the closest of which is located approximately 320 feet east-northeast of the SDG&E facility.

Cleanup and Abatement Order No. 87-95 was issued to San Diego Gas & Electric on May 29, 1987 in response to the petroleum hydrocarbon ground water contamination resulting from the leaky underground fuel tank at the Campo facility. Basically, the Cleanup and Abatement Order contained in today's agenda directs San Diego Gas & Electric to clean up the fuel contamination resulting from the unauthorized fuel discharge. The Order established a quarterly reporting program in which SDG&E must submit quarterly progress reports to this office for the remainder of the cleanup program.

ISSUE: Does San Diego Gas & Electric have any objections to the issuance of Cleanup and Abatement Order No. 87-95?

RECOMMENDATION: Staff will make a brief presentation on this item, if necessary.

SGH:ac

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, *Governor*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

9771 Clairemont Mesa Blvd., Suite B
San Diego, California 92124-1331
Telephone: (619) 265-5114

File

November 2, 1987

Mr. Jack Brunton, Supervisor
Environmental Affairs
San Diego Gas & Electric
P.O. Box 1831
San Diego, CA 92112

Dear Mr. Brunton:

TENTATIVE ADDENDUM NO. 1 TO ORDER NO. 87-95

Enclosed please find tentative Addendum No. 1 to Cleanup and Abatement Order No. 87-95. As you know, Cleanup and Abatement Order No. 87-95 was issued to San Diego Gas & Electric on May 29, 1987 in response to the presence of petroleum hydrocarbon contamination in the soil and ground water underlying the Mountain Empire Operating Center in Campo. Directive No. 1 of Order No. 87-95 required San Diego Gas & Electric to estimate the costs that would be incurred to achieve a range of final cleanup levels in the affected ground water contamination zone. In response to Directive No. 1, San Diego Gas & Electric submitted a report to this office dated July 1987.

The enclosed tentative Addendum No. 1 to Order No. 87-95 would, if adopted by the Regional Board, establish the final cleanup levels that San Diego Gas & Electric would have to achieve in the affected ground water contamination zone. Tentative Addendum No. 1 to Order No. 87-95 will be considered for adoption by the Regional Board at the November 16, 1987 Board Meeting. The meeting is open to public participation and you are welcome to attend. It is scheduled for 9:00 a.m. in the City Council Chamber, City of San Juan Capistrano, 32400 Paseo Adelanto, San Juan Capistrano, (714) 493-1191.

If you have any questions, please call Mr. Scott Hugenberger at the above number.

Very truly yours,

LADIN H. DELANEY
Executive Officer

SGH:rc

cc: Ms. Victoria Gallagher
Hazardous Materials Management Unit
County of San Diego Department of Health Services
1700 Pacific Highway
San Diego, CA 92101

TENTATIVE

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ADDENDUM NO. 1 TO
CLEANUP AND ABATEMENT ORDER NO. 87-95
SAN DIEGO GAS AND ELECTRIC
MOUNTAIN EMPIRE OPERATING CENTER
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On May 29, 1987 the Regional Board's Executive Officer issued Cleanup and Abatement Order No. 87-95 to San Diego Gas and Electric, Mountain Empire Operating Center in response to the presence of petroleum hydrocarbon contamination in the soil and ground water underlying the facility which is located at 31115 Highway 94 in Campo.

2. Directive No. 4 of Order No. 87-95 required San Diego Gas and Electric to design and estimate the costs to clean up the ground water contamination to a range of potential final cleanup levels. The potential final cleanup levels of petroleum hydrocarbon constituents under alternatives 4(a) and 4(b) correspond to naturally occurring background levels and to State Department of Health Services (DOHS) drinking water action levels, respectively. The DOHS action levels are as follows:

Constituent	Concentration
Benzene	0.7 µg/l
Toluene	100. µg/l
Total Xylenes	620. µg/l
Ethylbenzene	680. µg/l

3. In a report dated August 1987 and prepared by ERT, San Diego Gas and Electric submitted a report to this office pursuant to Directive No. 4 of Order 87-95 containing the following cost estimates versus final cleanup levels:

Alternative Under Order No. 87-95	Final Cleanup Levels	Estimated Cost
4 a	Background levels	$435,000
4 b	DOHS Action Levels	$340,000

4. After reviewing all of the information submitted to this office by San Diego Gas and Electric concerning the Mountain Empire Operating Center including cleanup costs, potential impacts to water quality, the location of the site, and the likelihood of future beneficial use of the affected ground water, the Regional Board has determined that the following final cleanup levels at this site would be (1) consistent with maximum benefit to the people of the State, (2) will not unreasonably affect present and anticipated beneficial use of the ground water and of Campo Creek, and (3) will not result in water quality less than prescribed in the Basin Plan or other adopted policies:

Constituent	Maximum Concentration
Benzene	0.7 µg/l
Toluene	100. µg/l
Total Xylenes	620. µg/l
Ethylbenzene	680. µg/l

It is hereby Ordered, that the following Directive No. 9 shall be added to Cleanup and Abatement Order No. 87-95:

9. San Diego Gas and Electric shall remove and/or treat the contaminated ground water to attain the following final cleanup levels in the affected ground water contamination zone:

Constituent	Maximum Concentration
Benzene	0.7 µg/l
Toluene	100. µg/l
Total Xylenes	620. µg/l
Ethylbenzene	680. µg/l

San Diego Gas and Electric shall submit a report to this office no later than October 1, 1989 containing the results of ground water sampling and analyses and any other information necessary to demonstrate that the above final cleanup levels have been attained in the affected ground water contamination zone. The report should also include sufficient information to demonstrate that the cleanup criteria established in Directive No. 6 have been achieved throughout the soil contamination zone.

Ordered by_____
LADIN H. DELANEY
Executive Officer

Dated:

Clerical Information Form (Please check applicable information for work desired)

(THIS FORM MUST ACCOMPANY ALL WORK TO BE PROCESSED BY THE TYPISTS)

Type of Format DUE DATE:_____ DATE SUBMITTED: 9/21/87

WDR___ NPDES___ Addendum ✓ Resolution___ C&D Order___ TCO___

Cleanup & Abatement___ Letterhead___ Memo letterhead___ Internal Memo___

Memorandum staff report___ C&D staff report___ Formal staff report___

Other_____

Word processing format ID Code_____ County Coops_____

Task Code: 123-08

File Designation: I'll file it
(title)

(Disch. Corr.___ Disch. Tech.___ General___)

Material prepared by: SGH

For signature of: LHD

cc's to: Co Health

SPECIAL INSTRUCTIONS

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(certified mail, return receipt, Express Mail, Federal Express, etc.)

_____Copy of notification letter in WDS computer in-basket

_____IF THIS IS AN EXPEDITE ITEM, PLEASE CHECK HERE AND FILL IN DATE/TIME REQUIRED TO BE COMPLETED_____
(attach red "Expedite" tag)

FOR MATERIAL SUBMITTED FOR TYPING, PLEASE ATTACH ANY BACKGROUND MATERIAL AVAILABLE FOR REFERENCE.

11/85

State of California
Regional Water Quality Control Board
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT
November 16, 1987

ITEM: 14 d.

SUBJECT: ENFORCEMENT
SAN DIEGO GAS AND ELECTRIC, MOUNTAIN EMPIRE OPERATING CENTER, SAN DIEGO COUNTY

DISCUSSION: On May 29, 1987 the Executive Officer issued a Cleanup and and Abatement Order No. 87-95 to San Diego Gas and Electric in response to petroleum hydrocarbon ground water and soil contamination resulting from the leak in the underground fuel storage tank system at the Mountain Empire Operating Center in Campo.

The tentative Addendum No. 1 to Order No. 87-95 contained in today's agenda would, if adopted, set State Department of Health Services drinking water action levels as the final cleanup levels to be achieved by San Diego Gas and Electric in the affected ground water contamination zone.

ISSUE: Should the Regional Board adopt Addendum No. 1 to Cleanup and Abatement Order No. 87-95?

RECOMMENDATION: Staff recommends the adoption of Addendum No. 1 to Order No. 87-95.

STATE OF CALIFORNIA

GEORGE DEUKMEJIAN, *Governor*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

9771 Clairemont Mesa Blvd., Ste. B
San Diego, California 92124-1331
Telephone: (619) 265-5114

February 17, 1988

Mr. Jack Brunton, Supervisor
Environmental Affairs
San Diego Gas & Electric
P.O. Box 1831
San Diego, CA 92112

Dear Mr. Brunton:

ADDENDUM NO. 1 TO ORDER NO. 87-95

Enclosed please find the adopted copy of Addendum No. 1 to Cleanup and Abatement Order No. 87-95. This Addendum was adopted at the November 16, 1987 Board meeting, and it establishes the final cleanup levels that San Diego Gas & Electric has to achieve in the affected ground water contamination zone.

If you have any questions, please call Mr. Scott Hugenberger at the above number.

Very truly yours,

Ladin H. Delaney

LADIN H. DELANEY
Executive Officer

LL

cc: Ms. Victoria Gallagher
Hazardous Materials Management Unit
County of San Diego Department of Health Serv
1700 Pacific Highway
San Diego, CA 92101

Do we want to make permit specific to presence or absence of free floating product?

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ADDENDUM NO. 1 TO
CLEANUP AND ABATEMENT ORDER NO. 87-95
SAN DIEGO GAS AND ELECTRIC
MOUNTAIN EMPIRE OPERATING CENTER
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On May 29, 1987 the Regional Board's Executive Officer issued Cleanup and Abatement Order No. 87-95 to San Diego Gas and Electric, Mountain Empire Operating Center in response to the presence of petroleum hydrocarbon contamination in the soil and ground water underlying the facility which is located at 31115 Highway 94 in Campo.

2. Directive No. 4 of Order No. 87-95 required San Diego Gas and Electric to design and estimate the costs to clean up the ground water contamination to a range of potential final cleanup levels. The potential final cleanup levels of petroleum hydrocarbon constituents under alternatives 4(a) and 4(b) correspond to naturally occurring background levels and to State Department of Health Services (DOHS) drinking water action levels, respectively. The DOHS action levels are as follows:

Constituent	Concentration
Benzene	0.7 µg/l
Toluene	100. µg/l
Total Xylenes	620. µg/l
Ethylbenzene	680. µg/l

3. In a report dated August 1987 and prepared by ERT, San Diego Gas and Electric submitted a report to this office pursuant to Directive No. 4 of Order 87-95 containing the following cost estimates versus final cleanup levels:

Alternative Under Order No. 87-95	Final Cleanup Levels	Estimated Cost
4 a	Background levels	$435,000
4 b	DOHS Action Levels	$340,000

4. After reviewing all of the information submitted to this office by San Diego Gas and Electric concerning the Mountain Empire Operating Center including cleanup costs, potential impacts to water quality, the location of the site, and the likelihood of future beneficial use of the affected ground water, the Regional Board has determined that the following final cleanup levels at this site would be (1) consistent with maximum benefit to the people of the State, (2) will not unreasonably affect present and anticipated beneficial use of the ground water and of Campo Creek, and (3) will not result in water quality less than prescribed in the Basin Plan or other adopted policies:

Constituent	Maximum Concentration
Benzene	0.7 µg/l
Toluene	100. µg/l
Total Xylenes	620. µg/l
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It is hereby Ordered, that the following Directive No. 9 shall be added to Cleanup and Abatement Order No. 87-95:

9. San Diego Gas and Electric shall remove and/or treat the contaminated ground water to attain the following final cleanup levels in the affected ground water contamination zone:

Constituent	Maximum Concentration
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Toluene	100. µg/l
Total Xylenes	620. µg/l
Ethylbenzene	680. µg/l

San Diego Gas and Electric shall submit a report to this office no later than October 1, 1989 containing the results of ground water sampling and analyses and any other information necessary to demonstrate that the above final cleanup levels have been attained in the affected ground water contamination zone. The report should also include sufficient information to demonstrate that the cleanup criteria established in Directive No. 6 have been achieved throughout the soil contamination zone.

I, Ladin H. Delaney, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, on November 16, 1987.

Ladin H. Delaney

LADIN H. DELANEY
Executive Officer

Dated: November 16, 1987

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

CLEANUP AND ABATEMENT ORDER NO. 87-95
SAN DIEGO GAS AND ELECTRIC
MOUNTAIN EMPIRE OPERATING CENTER
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. San Diego Gas and Electric's (SDG&E) Mountain Empire Operating Center is located at 31115 Highway 94 in Campo. The site lies in the Campo Hydrographic Subunit of the Tia Juana Hydrographic Unit.

2. On November 6, 1986, SDG&E removed an underground 550 gallon tank from the ground at the Campo site. It is not known exactly how old the tank was but it was installed before SDG&E bought the site in 1970. SDG&E used the tank for unleaded gasoline but it may have been used for other fuels before SDG&E purchased the site.

3. Although no holes were noted upon the removal of the tank, soil contamination was observed in the excavation by a representative of the County of San Diego Department of Health Services (DOHS).

4. On March 6, 1987 SDG&E submitted a subsurface investigation report to this office dated March 2, 1987 and prepared by ERT. The report contains the following information:

   a. Six postal water supply wells are known to exist within one mile of the SDG&E facility. The closest well is approximately 320 feet east-northeast of the site.

   b. Four borings were installed and converted to monitoring wells.

   c. No floating free product was found in any of the four monitoring wells.

   d. Ground water was encountered three to six feet below grade. Ground water flow direction is towards Campo Creek less than 100 feet downgradient.

   e. Soil samples collected from the borings were analyzed and found to contain as much as 111 mg/kg total extractable hydrocarbons. The soil samples contained less than 18 mg/kg total lead.

   f. A ground water sample collected from the downgradient monitoring well(MW-4) was analyzed and found to contain 54 mg/L of total extractable hydrocarbons. Ground water samples from monitoring well MW-3 and the upgradient monitoring well MW-2 showed no detectable levels of total extractable hydrocarbons. It is not known how far downgradient beyond MW-4 the dissolved product ground water plume extends. The areal extent of this plume has not been delineated.

5. On April 2, 1987 a meeting was held at the County of San Diego Department of Health Services (DOHS) with representative from DOHS, Regional Board and SDG&E. SDG&E staff indicated that the subsurface contamination may have originated from leaky fittings.

6. The *Comprehensive Water Quality Control Plant Report, San Diego Basin (9)*, (Basin Plan) was adopted by this Regional Board on March 17, 1975; approved by the State Water Resources Control Board on March 20, 1975; and updated by the Regional Board on February 27, 1978; March 23, 1981; January 24 and October 3, 1983; and August 27, 1984. The 1978, 1981, 1983 and 1984 updates were subsequently approved by the State Board.

7. Except where otherwise stated, the word "contamination" will be used in this Cleanup and Abatement Order with the following definition:

> "Contamination" refers to soil or ground water which contains waste or waste constituents which are not naturally occurring, or which contain waste or waste constituents in concentrations exceeding the naturally occurring background concentrations.

8. Section 13050(l) of the California Water Code defines "pollution" and "contamination" as follows:

> "Pollution means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects (1) such waters for beneficial uses, or (2) facilities which serve such beneficial uses."
>
> "Contamination" means an impairment of the quality of the waters to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" shall include any equivalent effect resulting from the disposal ofwaste, whether or not waters of the state are affected.

9. The Basin Plan established the following uses as the potential and existing beneficial uses for the ground water in the Campo Hydrographic Subarea:

   a. Municipal and Domestic Supply
   b. Agricultural Supply
   c. Industrial Service Supply
   d. Ground Water Recharge

10. To protect the beneficial uses listed in Finding 9, it is necessary that the ground water underlying the demolished service station site not contain constituents in concentrations exceeding the following levels State Department of Health Services Action Levels and Regional Board criteria:

Constituent	Maximum Allowable Concentration
Total Xylenes	620 µg/L
Benzene	0.7 µg/L
Toluene	100 µg/L
Ethylbenzene	680 µg/L
Total Petroleum Hydrocarbons	1.0 mg/L
Total Lead	50 µg/L

11. The unauthorized release of petroleum hydrocarbons at the SDG&E Mountain Empire Operating Center has caused a "pollution" and "contamination" of the state's waters as defined in Finding 8 in that the fuel has migrated from the tank system through the soil column, resulting in contaminant concentrations in the underlying ground water in excess of the levels listed in Finding 10. Thus, the municipal and domestic supply beneficial use of the ground water in the Campo Hydrographic Subunit has been impaired.

12. The quality of the ground water underlying 31115 Highway 94 in Campo is subject to the provisions of the State Water Resources Control Board's Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California* (hereinafter referred to as the Nondegradation Policy). Under the terms and conditions of the Nondegradation Policy, the existing (pre-discharge) ground water quality of the Campo Hydrographic Subunit must be maintained unless it is demonstrated that a decrease in water quality (1) will be consistent with maximum benefit to the people of the state, (2) will not unreasonably affect beneficial uses, and (3) will not result in water quality less than prescribed in the Basin Plan or other adopted policies.

13. This enforcement action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Section 15321, Chapter 3, Title 14, California Administrative Code.

IT IS HEREBY ORDERED, That pursuant to Section 13304 of the California Water Code:

1. SDG&E shall take:

   a. Effective remedial action to immobilize the free product plume, if any, and the dissolved product plume of petroleum hydrocarbon contaminated ground water.

   b. Effective remedial action to protect the beneficial uses of the ground water of the Campo Hydrographic Subunit of the Tia Juana Hydrographic Subunit.

   c. Effective remedial action to remove all free petroleum hydrocarbon product from the affected ground water.

d. Effective remedial action to clean up the petroleum hydrocarbon contaminated soil and ground water to the satisfaction of the Regional Board staff.

2. SDG&E shall submit monitoring reports to this office on a quarterly basis until, in the opinion of the Regional Board Executive Officer, the site has been cleaned up. The monitoring reports shall describe the progress made in the cleanup operations and shall demonstrate that the petroleum hydrocarbon waste released from the SDG&E service station has been and remains immobilized. The quarterly monitoring reports shall include, but not be limited to, the following information:

a. A description of the remedial actions employed by SDG&E.

b. Quantity of petroleum hydrocarbon product recovered for the reporting period and the total to date.

c. Quantity of ground water extracted for the monitoring period, the total to date, and its ultimate disposal point.

d. The water levels and product thicknesses in all of the wells.

e. Any information necessary to demonstrate that the petroleum hydrocarbon ground water contamination plume resulting from the unauthorized release from the underground tank system at the SDG&E is fully contained and immobilized.

f. A map of the site with hydrologic contours showing the ground water flow pattern and the locations of all of the wells.

g. A map of the site showing the boundary of the free petroleum hydrocarbon product plume and also of the dissolved product ground water plume.

h. A ground water sample should be collected from each monitoring well and analyzed for total petroleum hydrocarbons. At least one ground water sample within the contamination plume should be analyzed for:

(1) Benzene
(2) Toluene
(3) Total Xylenes
(4) Ethylbenzene
(5) Total Petroleum Hydrocarbons

The quarterly monitoring reports shall be submitted to this office in accordance with the following schedule:

Reporting Period	Date Due
January, February, March	April 30
April, May, June	July 30
July, August, September	October 30
October, November, December	January 30

3. SDG&E shall submit a report to this office no later than June 30, 1987 characterizing the vertical and horizontal extent of petroleum hydrocarbon contamination resulting from the fuel leak from the underground storage tank system at the Mountain Empire Operating Center in Campo. The report shall include the following:

   a. A site map showing the location of all borings and monitoring wells, the underground tank pit and any underground utilities that might act as conduits along which the petroleum hydrocarbons might migrate.

   b. The water levels and fuel product thicknesses in all of the wells.

   c. A site map showing the hydrologic contours and the boundary of the free product and dissolved product plumes.

   d. All ground water samples should be analyzed for:

      (i) Benzene
      (ii) Toluene
      (iii) Total Xylenes
      (v) Total Petroleum Hydrocarbons
      (vi) Ethylbenzene

   e. Soil samples should be analyzed for:

      (i) Benzene
      (ii) Toluene
      (iii) Total Xylenes
      (iv) Total Petroleum Hydrocarbons

4. Upon direction of the Regional Board Executive Officer at some point in the future, before the hazardous substance spill site cleanup program can be terminated, SDG&E shall submit a report to this office identifying and developing a range of remedial action alternatives for the final phase of the cleanup program. The report shall examine and determine the cost of a cleanup strategy capable of achieving each of the following potential final cleanup levels in the affected ground water zone:

   a. Treatment and/or removal of the contaminated ground water to attain the naturally/occurring background concentrations for the following constituents in the underlying ground water aquifer:

      (i) Benzene
      (ii) Toluene
      (iii) Ethylbenzene
      (iv) Total Xylenes
      (v) Total Petroleum Hydrocarbons
      (vi) Lead

      This cleanup alternative represents basically complete cleanup of contamination resulting from the petroleum hydrocarbon discharge.

b. Treatment and/or removal of the contaminated ground water to attain the following criteria in the underlying ground water aquifer:

Constituent	Maximum Concentration
Benzene	0.67 µg/L
Toluene	100 µg/L
Total Xylenes	620 µg/L
Ethylbenzene	680 µg/L
Total Petroleum Hydrocarbons	1.0 mg/L
Lead	50.0 µg/L

c. A remedial action alternative proposing the attainment of petroleum hydrocarbon concentrations less stringent than those specified in (a) and (b). This alternative concedes the affected ground water to a degraded status. It will be necessary to establish, to the satisfaction of the Regional Board, that the petroleum hydrocarbon concentrations being proposed by SDG&E under this alternative would comply with the following criteria in accordance with the state's nondegradation policy.

(1) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water contamination zone would not reasonably affect the beneficial uses listed in Finding 9.

(2) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water contamination zone will be consistent with the maximum benefit to the people of the state.

(3) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water contamination zone will not result in water quality less than prescribed in the Basin Plan or other adopted policies.

All free petroleum hydrocarbon product must be removed under all three alternatives.

5. The cleanup alternatives required under Directive 4 of this Order will be evaluated in detail by Regional Board staff. This evaluation will include technical considerations, estimated costs, and anticipated water quality impacts associated with each alternative. Based on this evaluation a specific cleanup alternative will be selected by the Regional Board for implementation. Upon notification by the Executive Officer, SDG&E shall implement the cleanup alternative selected by the Regional Board. If, however, SDG&E wishes to implement cleanup alternative 4(a), the Company will not be required to develop cleanup strategies corresponding to alternative 4(b) and 4(c). If SDG&E wishes to implement cleanup alternative 4(b), the company will not be required to develop a cleanup strategy corresponding to alternative 4(c).

6. SDG&E shall remove and/or treat all contaminated soil containing total extractable petroleum hydrocarbons in concentrations exceeding 100 mg/kg, unless SDG&E can demonstrate: (a) to the Regional Board's staff

satisfaction that higher soil concentrations will not act as a source of petroleum hydrocarbon contaminants to the underlying ground water by, for example, infiltration and leaching processes; (b) to the County of San Diego Department of Health Services' satisfaction that higher soil concentrations will not present a threat to the public or environmental health.

7. SDG&E shall dispose of petroleum hydrocarbon contaminated ground water and/or soil in accordance with all applicable local, state and federal regulations.

8. After SDG&E demonstrates to the Regional Board staff's satisfaction that the final cleanup levels have been achieved throughout the soil and ground water contamination zones, SDG&E shall continue to monitor the ground water and submit quarterly monitoring reports in accordance with Directive 2 of this Order for a period of one year. If at any time during this post-cleanup monitoring the data indicate that the final cleanup actions. If, on the hand, the final cleanup levels have not been exceeded for the year of monitoring, then the petroleum hydrocarbon cleanup shall be considered complete.

Ordered by Ladin H. Delaney

Ladin H. Delaney
Executive Officer

Date: May 29, 1987

SGH:vn

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

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1. ☒ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery.

3. Article Addressed to:

Mr. Jack Brunton, Supervisor
Environmental Affairs
SDG&E
P.O. Box 1831
San Diego, CA 92112

4. Article Number
P 493 255 525

Type of Service:
☒ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Always obtain signature of addressee or agent and DATE DELIVERED.

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7. Date of Delivery

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Jack Brunton
Environmental Affairs
SDG&E
P.O. Box 1831
San Diego, CA 92112

5/29/87